



PC SYSTEMS NEWS

■ SAMSUNG CLAIMS DRAM SPEED CROWN

Samsung Electronics has claimed the graphics memory speed crown after successfully manufacturing 2Gbit/s, 90nm,



512MB graphics Double Data Rate 3 (GDDR3) dynamic random access memory (DRAM).

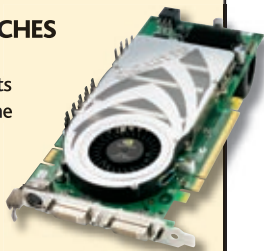
The memory is engineered to support advanced multimedia and graphics-intensive tasks, and is designed to be incorporated into high-end PCs, workstations and top-of-the-range game consoles. The electronics giant said the chips can run at speeds up to 8GB/s, which it says is around 70 per cent faster than traditional 1.2GB/s memory components.

According to market research firm Mercury Research, the global market for graphics DRAM will rocket 43 per cent to \$1.5 billion (around £830m) in 2005 before reaching levels in excess of \$2 billion (around £1.1 billion) in 2006.

At the same time as it demonstrated the super-quick 2Gbit/s DRAM chips, Samsung also began mass production of its 1.6Gbit/s 512MB GDDR3 components, which it first produced in December 2004. Generating 6.4GB/s throughput rates, the 1.6Gbit/s GDDR3 has begun shipping worldwide in graphics cards with a maximum memory capacity of 1GB.

■ NVIDIA LAUNCHES GEFORCE 7800

NVidia has launched its latest graphics card, the GeForce 7800. The official launch coincided with product availability, so you can buy one now. We were provided with



Gigabyte's 7800 GTX graphics card.

A core speed of 430MHz and 256MB of GDDR3 running at 600MHz (1.2GHz effective) clock the card faster than the default GeForce 6800 Ultra cards.

In our tests, Doom 3 scored 53.3fps running at 1,600x1,200 with 4x Full Scene Anti Aliasing (FSAA). This makes it the single fastest card on the market. Its performance is similar to two 6800 Ultras in SLI mode, but around £250 cheaper. If you want even more performance, then two of these in SLI mode will be ample.

The Gigabyte 7800 GTX is available for £380 now and is reviewed in full next month.

REVIEW MEDIA CENTRE PC

ACER Aspire L200 Living Centre

RATING ★★★★★

PRICE £899 inc VAT

DETAILS www.acer.co.uk



Few media centre PCs are as well camouflaged as Acer's Aspire L200 Living Centre. It looks like a standard DVD player or satellite TV box, but it's a fully functional PC. Only 60mm high, it's the perfect size for your entertainment cabinet but, as the processor fan vents through a grille on the top of the unit, we'd recommend allowing some space to avoid overheating. Clever cable routing and airflow control mean that the L200 is one of the quietest media centre PCs around, although the processor and power supply fans mean it's not silent.

The L200 comes with Windows XP Media Center edition. Media Center provides a clear and easily navigable interface for all the PC's media functions. The first time you run the application it finds all your photos, music and videos, configures the TV function and downloads the latest electronic programme guide. You can control it through the infrared keyboard or the TV-style remote control.

The L200 uses a single TV card capable of processing DVB-T and analogue TV signals, so you can receive the full gamut of digital terrestrial TV channels if they're available in your region, or the standard five analogue channels if not. You can't record one channel while watching another, though, as two separate tuners are required for that.

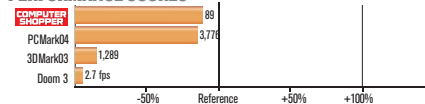
A slot-loading double-layer DVD writer is fitted, so you can archive your old programs and films once the 160GB hard disk fills up. Four of the eight USB2 ports and one of the two FireWire ports are hidden behind a panel on the front, the only visual clue to its computing capabilities. At the back are the usual computer inputs and outputs, as well as S-video and composite video in and out and S/PDIF out. An 802.11/g wireless network adaptor allows you to access the L200 from anywhere in your house using a similarly configured notebook or PC.

With an AMD Athlon 64 3200+ processor and 512MB of memory, the L200 is hardly a cutting-edge computer, but it's more than capable of basic computing tasks. Even video and image editing are attainable, although an extra 512MB of memory would help. All but the most basic games will struggle on the L200, though, as its onboard 128MB ATI Radeon X200 graphics just can't cope with complex moving images.

Other than the lack of dual tuners, there is little to complain about here. Well-executed media centre PCs are becoming more prevalent and Acer's Aspire L200 stands out as one of the best.

David McKinnon

PERFORMANCE SCORES



✓ Small and perfectly formed

✗ Single tuner

SPECIFICATIONS AMD Athlon 3200+ processor, 512MB memory, 160GB hard disk, 128MB ATI Radeon X200 graphics, DVB-T / analogue TV tuner, DVD±RW

HOTLIST DESKTOP PC

MESH Matrix Titanium Dual X2

RATING ★★★★★

PRICE £1,175 inc VAT

SUPPLIER Mesh 08700 464747

DETAILS www.mesh.co.uk

New technology is generally expensive, but Mesh has managed to put a dual-core processor in its averagely priced Titanium Dual X2. The AMD Athlon 64 X2 process has two 2.2GHz cores. When running multithreaded applications or more than one application at same time it storms ahead of single-core PCs.

Backed up by 1GB of memory, a 300GB hard disk and 256MB ATI Radeon X800 XL graphics card, the Mesh is a well-balanced system capable of dealing with any task. Its benchmark scores were excellent across the board.

The 17" LCD monitor is the only component that lets the side down a little, but it's not bad for the money. We're also not big fans of Mesh's new



case design, as the chrome-effect plastic looks a little cheap.

That said, this is an excellent system for the money and one that will get better as more applications are written to take advantage of two processor cores.

SPECIFICATIONS AMD Athlon 64 X2 4200+ processor, 1GB memory, 300GB hard disk, 256MB ATI X800 XL graphics, DVD±RW, 17" LCD

REVIEW DESKTOP PC**ADVENT
T8**

RATING ★★★★★

PRICE £999 inc VAT

SUPPLIER www.pcworld.co.ukDETAILS www.pcworld.co.uk

You usually have to pay a hefty premium to keep up with the latest technology, but Advent's T8 is surprisingly affordable. It costs under £1,000, but inside is the latest Intel Pentium D 820 processor. The D stands for dual core, which means that there are actually two processors on the same chip inside the Pentium D 820. Each runs at 2.8GHz and has its own 1MB of L2 cache. Advent has also included a generous 1GB of DDR2 PC4200 memory.

Although there are two processor cores doing the work, you won't see a twofold increase in performance unless you run applications that have been designed to use both cores. Our video-encoding benchmark takes advantage of dual-core processors, which is one reason why the T8's overall benchmark score is so impressive.

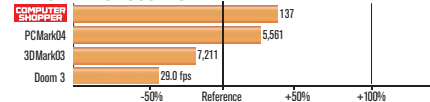
We expected Advent to make sacrifices elsewhere to allow for the cost of this powerful processor, but in the main it hasn't. The T8 comes with two 200GB hard disks, although surprisingly these aren't configured in a performance-boosting RAID array. Microsoft Windows Media Center Edition is used in conjunction with a TV card, so you can view and record analogue terrestrial TV and FM radio from the comfort of your armchair using the

slim remote control. A wireless network adaptor is included so you can share files throughout your home. The only slight disappointment is its 256MB ATI Radeon X700Pro graphics card, but even this is capable of running modern games at a fair speed when the detail level is turned down to medium.

It doesn't have the most attractive case, but the T8 is solidly built and has a wealth of inputs. Two USB and two FireWire ports, stereo audio in, composite and S-video inputs are fitted in addition to the standard rear-mounted ports, as is a 7-in-1 card reader. Although there are no separate speakers, the 17" display has a weak stereo set built-in. The screen itself isn't anything special, but it reproduces colours faithfully and produces reasonably smooth greyscales. It uses a captive D-sub cable, but its auto-adjust function works well.

The T8 combines excellent performance with a decent range of additional features at an affordable price. Only the wireless ball mouse and the keyboard are notably poor – budget an extra few pounds to replace them.

David McKinnon

PERFORMANCE SCORES

Powerful; great value for money



TV tuner can't receive Freeview

SPECIFICATIONS Intel Pentium D 820 processor, 1GB PC4200 memory, 400GB hard disk, 256MB ATI Radeon X700Pro graphics, DVD+/-RW +/-DL, DVD-ROM, 17" LCD

HOTLIST DESKTOP PC**DELL
Dimension 5000**

RATING ★★★★★

PRICE £1,099 inc VAT and delivery

SUPPLIER Dell 08709 075818

DETAILS www.dell.co.uk

Dell is the biggest producer of desktop PCs in the world, and this system based around the new BTX form factor shows why. The new design has better airflow using a single large fan and is noticeably quieter than older ATX systems. A great set of matched peripherals includes a 5.1-speaker system and a feature-packed 19" monitor.

The Dimension 5000's Pentium 3.4GHz processor combined with 1GB of RAM tore through our tests, achieving an overall score of 126 in our benchmarks. Gaming performance will impress all but the most hardcore gamers with a sturdy 48.4fps in Doom 3.



This is a powerful and desirable system, with everything you need to play games, edit video and burn your own DVDs. Its only downside is a fairly mean one-year collect and return warranty.

SPECIFICATIONS Intel Pentium 4 550 3.4GHz HT, 1GB RAM, 250GB hard disk, 256MB nVidia 6800 graphics, DVD+/-RW DL and DVD ROM drives, 19" LCD. Part code PPUK5-D04507R

**BYTE
SIZE!**

Our round-up of the best new gadgets and software

**SITECOM
Mediadrive 30GB**

RATING ★★★

PRICE £130 inc VAT

SUPPLIER www.askdirect.comDETAILS www.sitecom.com

Sitecom's Mediadrive looks like something the gas man would carry when he's come to read your meter. It's actually a battery-powered USB2 30GB hard disk, with an 8-in-1 memory card reader. You can take your photos directly from your camera and save them on the hard disk using the copy button. Unfortunately, though, there's no progress bar.



The device also won't charge over its USB connection, so you have to carry the power adaptor with you as well. Finally, it's around twice the price of a standard 30GB external hard disk. You'd be better off spending the money on large-capacity memory cards.

David Ludlow

**AKASA
PowerPlus 550W**

RATING ★★★★★

PRICE £86 including VAT

SUPPLIER www.overclock.co.ukDETAILS www.akasa.com.tw

Akasa describes this ATX power supply as 'server class', but servers are unlikely to need its twin PCI Express power connectors. They're welcome if you're building a powerful SLI gaming PC, though. The total output of 550W should be enough for most, but a 650W version costs another £13.

The PowerPlus has loads of connectors. There are four SATA plugs, two floppy drive connectors, and nine molex plugs for optical drives and parallel ATA disks. The main ATX connector supports both 20- and 24-pin motherboard sockets. The Asaka is 180mm deep and isn't quiet, so it'll need to be installed in a large case. Still, it's a good quality supply.

Simon Handby





BYTE SIZE!



Our round-up of the best new gadgets and software

APC Biometric Mouse

RATING ★★

PRICE £40 inc VAT

SUPPLIER <http://uk.insight.com>

DETAILS www.apc.com

APC's Biometric Mouse

has a fingerprint reader, so you can enter passwords with a quick swipe of a finger.

Unfortunately, the software misses the slickness of Microsoft's biometric utilities.

We had trouble making it remember website passwords, as the software often couldn't detect where the password field was. It worked much better for standard Windows password boxes, however.

The mouse looks quite cheap, which is a shame as it's very sensitive. It glides across the desk, while the optical sensor translates that into smooth movement on screen. The buttons and the scroll wheel are also OK.

Ultimately, it's a lot of money to spend on a mouse, particularly when the fingerprint software isn't very good.

David Ludlow



The Sure Thing



RATING ★★★★★

PRICE £8 inc VAT

DETAILS www.play.com

After East Coast student Gib (John Cusack) is turned down by Allison (Daphne Zuniga), he gives up on her and accepts



the promise of a 'sure thing' in California. Naturally, the two find themselves accidentally travelling across the country together. After they've overcome various obstacles – poverty, indecent exposure, showtunes – Gib isn't so sure that he wants the sure thing after all. Director Rob Reiner made some of America's best comedies in the 1980s and this offbeat romance is right up there, full of wit and charm and with two appealing leads. Sadly, this disc lacks the featurettes that appear on the Region 1 version, and includes only a trailer.

Chris Miller

REVIEW DESKTOP PC

SCAN 3XS Isotope

RATING ★★★★★

PRICE £1,270 inc VAT

SUPPLIER Scan 08707 554747

DETAILS www.scan.co.uk

There is little chance of losing Scan's 3XS Isotope, mainly because it looks like a Bond villain's bomb. Large transparent side windows open on to an interior bathed in purple neon, with a green neon string snaking around the motherboard, while the whole ensemble is blasted by a red strobe. The strobe gives an infuriating tweet with every blink, so be prepared to disarm, just as Bond surely would.

The outer shell opens like a 1920s' car bonnet, giving easy access to the components and the case is reasonably well ventilated. The power supply is mounted on the base at the front of the chassis and draws air through the case before blowing it out of the side vents.

It's tempting to view the 3XS as something of a gimmick, but a quick glance at the hardware tells you otherwise. Scan uses an AMD Athlon 64 4000+ processor running at 2.4GHz. This is assisted by 1GB of Corsair low-latency memory arranged in two 512MB sticks, each with their own heat sink and activity LEDs. Our *Shopper* application benchmarks show that even large video- or image-editing projects won't cause the 3XS to break a sweat.

As its toxic paint job suggests, the Isotope 3XS is primarily a gaming system. To this end, Scan

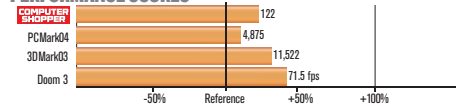


employs an XFX nVidia GeForce 6800GT graphics card with 256MB of memory. This flew through our benchmarks and ensures that current games perform excellently even in high detail. The lack of an SLI connector on the graphics card and second PCI Express slot on the motherboard mean you'll need deep pockets when you upgrade, as you have to replace the card rather than twin it with another identical one. A 250GB hard disk provides plenty of space for most tasks, but if you plan extensive video-editing projects, you'd be better archiving used files on a DVD using the NEC DVD writer.

The Isotope 3XS comes as a lone unit, leaving you to match it with your preferred monitor and so on. This is a money-saving approach if you already have these items, but it also disguises the fact that once you include a suitable 19" display, keyboard and mouse, the final price is around £1,600 including VAT. As it happens, this is still surprisingly competitive for such a distinctive PC. As it is the cutting-edge processor that ensures the 3XS is expensive, we'd suggest you opt for a 3800+ based system instead in order to get more for your money.

David McKinnon

PERFORMANCE SCORES



✓ Quirky case gives easy access and mobility; fast gaming system

✗ More expensive than similar components housed in a standard PC chassis

SPECIFICATIONS AMD Athlon 64 4000+ processor, 1GB memory, 250GB hard disk, 256MB nVidia GeForce 6800GT graphics, DVD+/-RW

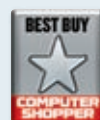
HOTLIST DESKTOP PC

PC NEXTDAY Zoostorm Athlon 64 3400+ Family PC Package

RATING ★★★★★

PRICE £799 inc VAT

DETAILS www.pcnextday.com



It may not look that special at first glance, but the Zoostorm's performance and multifunction peripheral set it apart from the competition. It includes HP's PSC 1215, which can print, scan and copy and received a five-star review and a Best Budget Buy award in *What's New, Shopper* January 2005.

The other peripherals are equally impressive. There's a capable Creative 2.1 speaker set, a webcam and a great Microsoft wireless desktop set that includes a mouse with a tilting scroll wheel.

The 200GB hard disk provides plenty of storage, while the Athlon 64 3400+ processor,

1GB of RAM and 128MB GeForce 6600GT graphics card give good performance in all tasks.

The warranty is a little disappointing, with only one year's cover and a helpline that's only open Monday to Friday. Aside from that, the excellent bundled peripherals, well-chosen components and low price make the Zoostorm a real winner.

SPECIFICATIONS AMD Athlon 64 3400+ processor, 1GB RAM, 200GB hard disk, 128MB nVidia GeForce 6600GT graphics, DVD+/-RW DL, DVD-ROM, 17" LCD



CHOOSING A...

PC SYSTEM

Follow our simple step-by-step guide to buying a PC and get the perfect system for your needs

1 The minimum specification of PC we recommend, shown in grey opposite, is a good starting point when working out your ideal system. This PC would cost around £500 and is perfectly capable of running everyday office, multimedia or education software, as well as doing anything on the internet. But it's an unexciting PC. It will be able to play DVD movies, but they won't sound too impressive and games are a total no-no.

2 If you're interested in editing your own movies, you'll need a DVD rewriter. Make sure that you get one that supports both +R and -R formats. It's also worth getting one that will write double-layer discs, as this lets you squeeze twice as much information on a DVD.

There's not much difference in price between the different drive speeds, so we recommend getting one that can write DVD+R and DVD-R at 16X, and DVD+R DL at 4X. If you'll be doing a lot of video projects and disc writing, upgrade to a 200GB hard disk as a minimum.

3 Interested in games? Then upgrade to 512MB or 1GB of memory and a 200GB disk and get a graphics card. Budget cards based on the GeForce FX 5200 graphics processor or Radeon 9800 will cope with this year's games, but to play next year's just as smoothly (and enjoy gorgeous graphics today) you'll want anything up to a GeForce FX 6800Ultra or Radeon X850XT. You'll also need a faster processor.

4 Which faster processor? Well, faster AMD processors such as the Athlon 64 3400+ are good value. An Athlon FX-based system will cost £300 more but offers much better performance. The alternative is a PC based on Intel's Pentium 4 processor. These are also pricier, but many people feel reassured by the Intel brand, and the fastest P4s always do well in our performance tests.

5 If you're really not interested in games you can definitely live with integrated or cheap graphics, but there are plenty more reasons to upgrade the memory, hard disk or processor. If you'll use your PC for serious DTP, music or photo editing you need the same kind of processor, memory and disk as

for games. For video editing, consider getting two hard disks, perhaps in a RAID array.

6 A quality sound system will enhance all manner of PC activities. To hear the surround soundtrack of a DVD at its best, you'll need a quality 5.1 speaker system. Games can also use such a system to throw sound effects around you. If you're interested in neither games nor DVDs (or don't want to trail wires all around the room), go for a quality stereo pair with a sub-woofer to boost the bass instead.

If you're interested in music or want better-quality sound, you'll need to invest in a dedicated sound card. As well as providing enhanced sound, such as Environmental Audio eXtension (EAX), which tweaks the acoustics to make sound appear to be playing in different environments, you'll get higher-quality outputs and more inputs.

7 Although 17" LCD screens save on desk space and look stylish, the limited display size means some may find onscreen text hard to read. A 19" LCD will cost around £50 more, has the same resolution (1,280x1,024) and is easier on the eye. It's a better choice for those who want to edit large photos, documents or spreadsheets, run two applications side by side, or just look important. Twenty inch LCDs are available from £400 and have a much higher resolution (1,600x1,200).

FILL IN YOUR SPECS HERE

(Recommended minimum in grey)

PROCESSOR: Athlon 64 3000+

MEMORY: 256MB DDR

HARD DISK: 120GB

STORAGE: 52xCD-RW/16xDVD combo drive

SOUND: Integrated

SPEAKERS: Stereo

GRAPHICS: Integrated

MONITOR: 17" LCD

EXTRAS: 56K modem

CONNECTORS: 4x USB2, network

SOFTWARE: Windows XP Home Edition

BASICS: Keyboard, mouse

8 The standard set of connectors can be usefully improved with extra USB2 ports, to which most run-of-the-mill PC gadgets attach, and a FireWire port, for fancy gadgets including digital video (DV) cameras.

9 Windows XP Home Edition is preinstalled on most new PCs. Any extra software bundled should be assessed critically. It may be that you'll never actually use it. But equally, you may happen across a PC that includes software you'd otherwise have paid for, in which case you'll almost certainly save lots of money by having it preloaded, although you won't get technical support included.

10 Money left over? A TV card will let you watch television on your PC screen plus record programmes to your hard disk, or capture analogue video from a camcorder. Rather than splashing out on an extended warranty, pay extra to get the make of PC your friends or colleagues swear by.

